

Attorney Docket No. 3551.P052

JAN 10 2008

Patent
10/608,310IN THE CLAIMS

Please amend claims as follows:

1. (Currently amended) A method comprising:

time-stamping a lead packet in each of a plurality of chunks, each of the plurality of chunks comprising the lead packet and a plurality of packets, the lead packet comprising a program clock reference (PCR) packet;

storing ~~a subset of the time-stamped packets~~ chunks on a storage medium;

reading back at playback time the stored ~~packets~~ chunks with their timestamps from the storage medium; and

reconstructing a partial transport stream using the ~~packets~~ chunks and their timestamps read back, wherein the ~~packets~~ chunks are arranged in the partial transport stream in response to their timestamps.
2. (Original) The method of claim 1, further comprising:

receiving a full transport stream; and

filtering the full transport stream to generate the subset of time-stamped packets.
3. (Original) The method of claim 1, wherein the storage medium is an external memory.
4. (Original) The method of claim 3, wherein the external memory comprises a double data rate memory (DDR).

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5. (Currently amended) The method of claim 1, wherein time-stamping includes recording a value of a counter for the lead packet each of the plurality of packets.
6. (Original) The method of claim 5, wherein the counter is a system time clock counter.
7. (Currently amended) A method comprising:
reading a plurality of chunks of a partial transport stream from a storage medium;
parsing a lead packet of each of the plurality of chunks to extract [[the]] temporal information of the lead packet, wherein the temporal information includes the chunk length of the chunk associated with the lead packet; and
reconstructing the partial transport stream using the extracted temporal information and the plurality of chunks, wherein the lead packet is placed in the partial transport stream in response to the temporal information.
8. (Original) The method of claim 7, wherein the storage medium is an external memory.
9. (Original) The method of claim 8, wherein the external memory comprises a double data rate memory (DDR).
10. (Original) The method of claim 7, wherein the lead packet is a program clock reference (PCR) packet.

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11. (Canceled).
12. (Original) The method of claim 7, wherein the temporal information includes the release time of the lead packet.
13. (Currently amended) A method comprising:
- detecting a signal;
 - dynamically selecting a first or a second modes in response to the signal,
- wherein the first mode includes
- time-stamping each of a plurality of packets,
 - storing a subset of the time-stamped packets on a storage medium,
 - reading at playback time the stored packets from the storage medium, and
 - reconstructing a first partial transport stream using the timestamps of the plurality of packets, wherein the plurality of packets are arranged in the first partial transport stream in response to the timestamps; and
- wherein the second mode includes
- reading a plurality of chunks of a second partial transport stream from the storage medium,
 - parsing a lead packet of each of the plurality of chunks to extract the temporal information of the lead packet within the second partial transport stream,
- wherein the temporal information includes the chunk length of the chunk associated with the lead packet, and

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reconstructing the second partial transport stream using the extracted temporal information and the plurality of chunks, wherein the lead packet is placed in the second partial transport stream in response to the temporal information.

14. (Original) The method of claim 13, wherein the storage medium is an external memory.
15. (Original) The method of claim 14, wherein the external memory includes a double data rate memory (DDR).
16. (Currently amended) A method comprising:
 - receiving an annotated partial transport stream from an external source;
 - storing a plurality of time-stamped packets chunks from the partial transport stream on a storage medium;
 - reading back at playback time the stored time-stamped packets chunks from the storage medium; and
 - reconstructing the partial transport stream using temporal information extracted from the plurality of time-stamped packets chunks, the plurality of time-stamped packets chunks being arranged in response to their timestamps, said temporal information including chunk lengths of the plurality of time-stamped chunks.
17. (Original) The method of claim 16, wherein the storage medium is an external memory.

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18. (Original) The method of claim 17, wherein the external memory includes a double data rate memory (DDR).
19. (Currently amended) A system comprising:
- a storage medium;
 - a transport processor coupled to the storage medium, the transport processor operable to time-stamp each of a plurality of ~~packets~~ chunks received and to store ~~one or more of the time-stamped packets~~ the plurality of chunks on the storage medium; and
 - a playback device coupled to the storage medium, the playback device operable to read back the stored ~~packets~~ chunks from the storage medium and to reconstruct at playback time a partial transport stream with the ~~packets~~ chunks read back, a chunk length extracted from a lead packet of each of the plurality of chunks, and the timestamps of the ~~packets~~ chunks read back.
20. (Original) The system of claim 19, wherein the storage medium includes an external memory.
21. (Original) The system of claim 20, wherein the external memory includes a double data rate memory (DDR).
22. (Original) The system of claim 19, wherein the transport processor comprises a filter to turn an incoming full transport stream into a partial transport stream, the partial transport stream includes the one or more of the plurality of packets.

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23. (Original) The system of claim 22, wherein the transport processor further comprises a system time clock (STC) counter to record the time when each of the plurality of packets is received.
24. (Currently amended) A system comprising:
a storage medium; and
a playback device coupled to the storage medium, the playback device including
an interface to read a plurality of chunks of a partial transport stream from
the storage medium, each of the plurality of chunks including a lead packet,
a parser to parse the lead packet to extract [[the]] temporal information of
the partial transport stream, wherein the temporal information includes the chunk length
of the chunk associated with the lead packet, and
a processing logic module to reconstruct the partial transport stream with
the temporal information and the plurality of chunks.
25. (Original) The system of claim 24, wherein the storage medium includes an
external memory.
26. (Original) The system of claim 25, wherein the external memory includes a
double data rate memory (DDR).
27. (Original) The system of claim 24, wherein the lead packet is a program clock
reference (PCR) packet.

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28. (Canceled).
29. (Original) The system of claim 24, wherein the temporal information includes the release time of the lead packet of each of the plurality of chunks.
30. (Currently amended) A system comprising:
- a storage medium;
 - a playback device coupled to the memory;
 - a processor coupled to the storage medium operable to receive a signal and to dynamically select a first mode or a second mode in response to the signal,
- wherein the first mode comprises
- time-stamping each of a plurality of packets,
 - storing a subset of the time-stamped packets on the storage medium,
 - reading at playback time the stored packets from the storage medium, and
 - reconstructing a first partial transport stream with the packets read; and
- wherein the second mode comprises
- reading a plurality of chunks of a second partial transport stream from the storage medium, each of the plurality of chunks including a lead packet,
 - parsing a lead packet of each of the plurality of chunks to extract the temporal information of the lead packet in the second partial transport stream, wherein the temporal information includes the chunk length of the chunk associated with the lead packet, and
 - reconstructing the second partial transport stream with the temporal information of the lead packets and the plurality of chunks.

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31. (Original) The system of claim 30, wherein the storage medium includes an external memory.

32. (Original) The system of claim 31, wherein the external memory includes a double data rate memory (DDR).

33. (Original) The system of claim 31, wherein the external memory includes a hard disk.

34. (New) A method comprising:

in response to a signal, dynamically selecting a timestamp-per-packet mode or a timestamp-per-chunk mode to reconstruct a video stream, and

if the timestamp-per-chunk mode is selected,

reading a plurality of chunks from a storage device, each of the plurality of chunks comprising a lead packet and a plurality of packets;

parsing a lead packet of each of the plurality of chunks to extract temporal information and a chunk length of a respective chunk from the lead packet; and

reconstructing the video stream using the plurality of chunks, the temporal information, and the chunk length.

35. (New) The method of claim 34, wherein reconstructing the video stream comprises:

placing the lead packet in the video stream according to the temporal information.

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36. (New) The method of claim 34, wherein the lead packet is a program clock reference (PCR) packet.

37. (New) A system comprising:

a storage medium;

a processor coupled to the storage medium operable to dynamically select a timestamp-per-packet mode or a timestamp-per-chunk mode to reconstruct a video stream, wherein, if the timestamp-per-chunk mode is selected, the processor is operable to retrieve a plurality of chunks from the storage device, each of the plurality of chunks including a lead packet and a plurality of packets, the processor is further operable to parse the lead packet of each of the plurality of chunks to extract temporal information and a chunk length of a respective chunk, and to reconstruct a video stream using the plurality of chunks, the temporal information, and the chunk length.

38. (New) The system of claim 37, further comprising:

a playback device coupled to the processor to play the video stream reconstructed.

39. (New) The system of claim 30, wherein the storage medium includes an external memory.

40. (New) The system of claim 31, wherein the external memory includes a double data rate memory (DDR).